Simplify. (11-5)

61. $\sqrt{169m^2}$ **62.** $\sqrt{48a^2}$ **63.** $\sqrt{125x^4}$ **64.** $\sqrt{54e^3}$ **65.** $-\sqrt{36t^6}$

66. $\sqrt{98u^2v^2}$ **67.** $-2\sqrt{72x^3y^2}$ **68.** $\sqrt{324r^4s^6}$ **69.** $-\sqrt{4.84w^4}$ **70.** $\sqrt{5.76c^6}$

71. $\sqrt{\frac{a^4b^6}{12c^2}}$ **72.** $\sqrt{\frac{48u^5v^2}{4uv^4}}$ **73.** $\sqrt{\frac{144k^8}{256}}$ **74.** $\sqrt{\frac{3600}{81m^{36}}}$ **75.** $\sqrt{\frac{225x^{40}}{16}}$

76. $\sqrt{x^2 + 8x + 16}$ **77.** $\sqrt{a^2 - 4a + 4}$ **78.** $\sqrt{81 + 18k + k^2}$

Solve. (11-5)

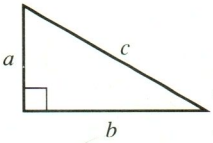
79. $g^2 = 49$ **80.** $h^2 - 64 = 0$ **81.** $25m^2 = 16$

82. $9x^2 - 4 = 0$ **83.** $6y^2 - 54 = 0$ **84.** $32t^2 - 27 = 0$

Find both roots of each equation to the nearest tenth. (11-5)

85. $a^2 = 132$ **86.** $b^2 - 208 = 0$ **87.** $11c^2 = 473$

In Exercises 88–95, refer to the right triangle shown at the right. Find the missing length correct to the nearest hundredth. (11-6)



88. $a = 3$, $b = 4$, $c =$? **89.** $a = 5$, $b = 8$, $c =$?

90. $a =$?, $b = 9$, $c = 13$ **91.** $a =$?, $b = 10$, $c = 15$

92. $a = 8$, $b =$?, $c = 16$ **93.** $a = 20$, $b =$?, $c = 30$

94. $a = 12$, $b = \frac{3}{4}a$, $c =$? **95.** $a = \frac{2}{3}b$, $b = 15$, $c =$?

State whether or not the three numbers given could represent the lengths of the sides of a right triangle. (11-6)

96. 21, 28, 35 **97.** 9, 9, 12 **98.** 45, 60, 75

99. 31, 41, 51 **100.** $6a$, $8a$, $10a$, $a > 0$ **101.** $5a$, $7a$, $9a$, $a > 0$